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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/675,721 | 01/10/2001 | Nicholas F. Borrelli | SP00-080 | 3514 |

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CORNING INCORPORATED
SP-TI-3-1
CORNING, NY 14831

EXAMINER

HOFFMANN, JOHN M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1731

DATE MAILED: 02/07/2003

14

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/675,721

Applicant(s)

BORRELLI ET AL.

Examiner

John Hoffmann

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-19 and 25-39 is/are pending in the application.
- 4a) Of the above claim(s) 35 and 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-19, 25-34, 36, 38 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,5,7,8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Applicant's election of Species A, D, E, H and M in Paper No. 13 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 35 and 37 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected specie, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 13.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Atkins 5287427.

It is noted that there is improper antecedent basis for many terms: in such an instance, any "said" or "the" is interpreted as being "a". For example, line 3 "said" is interpreted as "a" because there is no prior mention of any substrate.

The invention is disclosed in the paragraph spanning cols. 5-6 and figure 3. Layer 32 is the selected material. Since it is a germanosilicate glass (as is Applicant's glass) it is deemed that it is a "silica-based bulk glass substrate material". In as much as molten glass can be considered a "bottle material" even though it is not the form of a bottle, the material/composition of the glass that comprises layer 32 is a bulk substrate material because one can use to make it into a substrate or to have it in a bulk form. It is noted that from some definitions a material in the form of a substrate cannot be considered to be "bulk". See col. 3, line 51 for the wavelength that is less than below 300 nm. The steps of focusing, translating, and inducing are clearly taught. As to the "substantially no laser induced breakdown"; it is clear that since the Atkins invention creates a usable waveguide - any breakdown must be minimal, ie "substantially" none.

Claim 17: The Atkins layer 32 material substantially homogeneous.

Alternatively, the claim does not specify that the glass of claim 16 is must be the same as the homogenous glass. Claim 17 is so broad as to read on someone else selecting some other glass many miles away for some completely other purpose. It is deemed that glass bottles have substantially homogenous - such compositions were

selected by someone when they first made the bottles. Examiner takes official notice that glass bottles have been in existence at least one year prior to Applicant's invention.

Claim 18: the Atkins glass is substantially homogeneous to the extent that it permits the creation of usable waveguide. Alternatively, Atkins selects only a single composition; it inherently has an index. Whereas an object made of the composition might have variations, the claim does not require selecting any object - only a composition, i.e. a chemical formula. A composition is itself and only itself - if it has some other material in it, then it is not the original composition - it is combination of the two things.

Claims 25, 29-30, 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Cocito 6209356.

The figures of Cocito clearly show the invention. 13 is the interior with a homogenous composition. 9 is the laser beam. 11 is the lens. The relative motion, is the motion of the fiber.

Claims 29 and 30 does not indicate where or when the doped glass/homogeneous glass is provided. It could be many miles away - many years in the future or in the past. It is inherent that there was such a glass provided somewhere at some time - see any of the other art of record.

Claim 34: see col. 2, line 49.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 26, 31-33, 36, 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cocito.

Claim 26: The claim does not state when the two planes must not be parallel. It would have been obvious to one of ordinary skill, that the two ends of the fiber would not be parallel as one connects the fiber to whatever device it is to be used in. It would have been obvious to wind the Cocito fiber onto a spool; as the spool rotates, the first end of the spool would rapidly change its orientation - and for some period of time, the ends would not be parallel.

Claim 31: since Applicant has the same wavelength and the same sort of glass that Cocito has, it is deemed that they would have the same internal transmission.

Claims 32-33: See Cocito at col. 2, lines 64-66. However, it does not indicate what wavelength the change in index is. The Office does not have the facilities to test

such. It would have been obvious to expect that the change in index at 633 nm meets the values claimed - because Cocito disclose a value three times that of the minimum claimed, and because Cocito does what Applicant does. Alternatively, it would have been obvious to one practicing the Cocito method, to treat the glass so the index change is as disclosed - for all wavelengths - because Cocito discloses that such a change is possible - and because the more of a change, the better the waveguide can focus.

Claim 36, it would have been obvious that there was a 193 nm excimer laser somewhere within 500 miles of planet earth as per the art cited by Applicant in the various IDS's. It is noted the claim does not require that the excimer laser of claim 37 is the laser of claim 25. The broadest reasonable interpretation is that the excimer laser can be provided anywhere. If it is desired that the coupled laser beam is the excimer laser beam, the claims must explicitly recite such - it is improper for the Office to interpret the claim as requiring such - since the claims do not recite such.

Claim 38 is met in at least two different ways. First, from figure 3, there is shown two cores that are perpendicular to each other. It is clear that any light is coupled between both of them. The second way: One can arbitrarily divide the fiber into two lengths - the first length is the first guide, the second length is the second guide.

Claim 19, 25, 27, 28 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkins 5287427.

It would have been obvious to have each glasse of the Atkins substrate to be as homogenous as possible - with no new or unexpected results. It is clear that the refractive index of the Atkins invention is an important parameter. One would know that if the index is something other than what it is suppose to be, that the device would not effect the optical signal in the manner in which it is intended.

Claim 25: Atkins discloses the invention as claimed, but doesn't disclosed how the focused light is focused. It would have been obvious to use a lense to focus the light, because by defintion, anything which causes light to be focused is a lense.

Claim 27: The end faces shown in 3 are planes that are not parallel to the tunnel

Claim 28: it would have been obvious to repeat the Atkins process many times, so as to make many waveguides - so as to make more money. It would have been obvious to stack the waveguides, so that one can easily store or ship them. Three stacked waveguides (with or without packaging) would result in three different planes.

Claim 31: since Applicant has the same wavelength and the same sort of glass that Atkins has, it is deemed that they would have the same internal transmission.

Claim39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Atkins or Cocito alone or in view of Hunter 5999672.

Atkins does not disclose the multiplexer. The claim does not require any relation ship between the written waveguide and the multiplexer. The claim is so broad that it encompasses the making of a multiplexer hundreds of miles a way at some completely different time. The claimed multiplexer is well known (see Hunter). IT would have been

obvious that such a multiplexer was created by someone at sometime prior to Applicant's invention. Alternatively, it would have been obvious to make the Hunter multiplexer so as to sell it and make money. This is not to say it would have been obvious to make it by the Atkins method.

Cocito is applied in the same way that Hunter is.

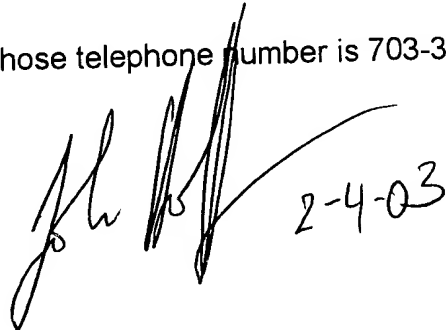
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sautter, Saito, OnoWeber, Borrelli, Sugioka, Maxwell, and Atkins 5500031 are cited as being of general interest.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.



**JOHN HOFFMANN
PRIMARY EXAMINER
GROUP 1300**